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Abstracts

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Policy, Research, and External Affairs

WORKING PAPERS

Abstracts

628. The Indonesian Family Planning Program: An Economic Perspective

Dov Chernichovsky, Henry Pardoko, David De Leeuw, Pudjo Rahardjo, and Charles Lerman

The intrauterine device (IUD) and (less so) the injectable are relatively cost-effective methods of contraception that could probably improve contraceptive prevalence. They both require capital investment and trained medical manpower — which are beyond the means and jurisdiction of Indonesia's family planning agency but would probably pay off, especially in improved health care.

A comparative analysis of three provinces in Indonesia indicates that the IUD and, to less extent, the injectable, are methods that, if available, would probably be used and would contribute to high contraceptive prevalence.

Moreover, the IUD appears to be relatively cost-effective.

But the IUD (and to less extent the injectable) requires capital investment and trained medical manpower (which are beyond the means and control of Indonesia's National Family Planning Coordinating Board, BKKBN).

The relative delivery cost of different methods are inversely related to their efficacy — so the most cost-effective methods are also the most efficient — probably also in terms of demographic impact. Differences in the mean age of users for the IUD (32.5), pill (30), and injectable (29) are slight — so reproductive potential and risk of pregnancy are about equal among different user groups.

Clearly, altering the delivery system — particularly in favor of methods that require medical facilities and staff — requires investment in facility, staff, and the cost of initiating a new method. This merits a detailed cost-benefit analysis, as the data strongly suggest that such investments might pay off, especially because they would also improve medical care.

This paper is a product of the Population, Health, and Nutrition Division, Population and Human Resources Department of the World Bank, in cooperation with the Indonesian National Family Planning Coordinating Board, and the Ministry of Foreign Affairs of the Royal Government of the Netherlands. It is part of a larger effort in PRE to examine the economics of family planning. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Otilia Nadora, room S6-065, extension 31091 (185 pages).

629. An Atheoretic Evaluation of Success in Structural Adjustment

Patrick Conway

Countries that followed a prescription of relatively low government spending, deep financial markets, and outward orientation in trade policy performed significantly better than those that did not when countries are ranked by adjusted economic performance.

Conway presents and implements a methodology for assessing the success of structural adjustment based on a "fixed effect" methodology.

He examines data for 75 countries over 11 years. Performance indicators include measures of inflation, economic growth, external balance, and physical investment. He measures government policies in terms of spending, trade regime, financial deepening, and real exchange rate policy.

The empirical estimates he obtains suggest that ranking countries by adjusted economic performance yields significantly different results than ranking them by historical performance.

Further, countries following a prescription of relatively low government spending, deep financial markets, and outward orientation in trade policy performed significantly better than those that did not.

This prescription was correlated significantly with more rapid economic growth, current accounts with lower deficits, expanded investment, and reduced inflation.

This paper — a product of the Trade Policy Division, Country Economics Department — is part of a larger effort in PRE to identify empirical regularities in the nexus of economic performance and government policy for developing countries. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Dawn Ballantyne, room N10-025, extension 37947 (63 pages, with tables).

630. The Spirit of Capitalism and Long-run Growth

Heng-fu Zou

In the long run, cultural attributes and the spirit of capitalism help explain why Japan, the four Asian "miracles," and many countries with Protestant religion have succeeded economically.

Why do different countries have different long-term savings and growth rates? Why is the productivity rate not the same around the world? Recent new theories of endogenous growth have tried to answer these questions by replacing the usual assumption of diminishing returns in production. Zou offers an alternative: he introduces "the spirit of capitalism" (as Max Weber used the term) into the model.

In the long run, countries with different degrees of capitalist spirit will have different consumption, capital stock, and endogenous growth rates. In Zou's model (unlike traditional models), inflation is no longer superneutral in relation to long-run growth.

Zou provides a formal model that supported by many empirical and historical studies on cultural attributes and economic development. His model helps explain:

- Why Japan and the four Asian "miracles" have succeeded.
- Why nations that had an established Protestant religion in 1870 had per capita income in 1979 that was more than a third higher than in Catholic nations.
- Why British industry has declined since 1850.

This paper — a product of the Public Economics Division, Country Economics Department — is part of a larger effort in PRE to study long-run growth and economic policies. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Ann Bhalla, room N10-055, extension 37699 (28 pages).

631. The Macroeconomics f the Public Sector Deficit: he Case of Morocco

iccardo Faini

Growth has remained relatively high in Morocco, and inflation subdued. Morocco has made great progress toward macroeconomic and fiscal stability, but the need remains for an unshaken commitment to scal discipline, a determined effort to reform the tax and public spending systems, and a measured attempt to make redit available for investment and to beralize financial markets.

Morocco's recent economic history resembles those of many African countries. Morocco's economic difficulties originated in the commodity (phosphate) boom of the mid-1970s, which coincided with rising government spending and an unprecedented expansion of public investment — ending Morocco's earlier fiscal conservatism. A sudden reversal of the terms of trade in the late 1970s — a result of a plunge in phosphate prices and the second oil shock — prompted Morocco to resort increasingly to external capital markets to maintain an unabated level of public spending.

But the continued deterioration of the terms of trade and the unexpected rise in international interest rates, together with the severe drought of 1980-84, eroded debt service capacity and precipitated a major foreign exchange crisis in 1983.

In response to this crisis, Morocco launched a medium-term program of economic reform and introduced comprehensive stabilization and structural adjustment measures. Since 1983, Morocco has made great progress in alleviating both internal and external disequilibria — reducing the budget deficit from 9 percent of GDP in 1982 to 4.5 percent in 1988, and the current account deficit from 12 percent of GDP to 0.4 percent in the same period.

Interestingly, growth has remained fairly high in Morocco, at least in relation to other highly indebted countries, and inflation subdued. Morocco's performance seems to contradict the perceived wisdom that large budget deficits will foster inflation. The inflation record is particularly surprising because Morocco achieved a 20 percent real depreciation in the 1980s.

Faini argues that wage moderation and judicious monetary policies were instrumental in restraining inflation. With a brief exception in 1983, monetary authorities remained firmly committed to avoiding inflationary financing of the budget deficit. But this strategy could succeed only because of the wide-ranging system of credit and monetary regulations that channeled domestic funds toward the treasury at relatively low cost. But the prospects for continuing such a strategy are not favorable.

Growth performance can be attributed to an outstanding export response to the new trade regime and to favorable supply shocks — including a string of record agricultural harvests and the collapse of real oil prices.

Morocco has made great progress toward macroeconomic and fiscal stability but the author recommends:

- An unshaken commitment to fiscal discipline. Increased government spending will probably crowd out investment. The short-run benefits on output of such spending may be outweighed by its long-run negative impact on growth.
- A determined effort to reform the tax and public expenditure system, so the brunt of fiscal adjustment will not again fall mostly on public investment.
- Encouraging the availability of credit, which significantly influences the demand for investment.
- Studying the impact of macroeconomic equilibria, especially on the government budget, to assess the best speed for financial liberalization.

This paper — a product of the Macroeconomic Adjustment and Growth Division, Country Economics Department — is part of a PRE research project, The Macroeconomics of the Public Sector Deficit (RPO 675-31). Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Raquel Luz, room N11-057, extension 34303 (39 pages).

632. The Macroeonomics of the Public Sector Deficit: The Case of Argentina

Carlos Alfredo Rodriguez

Argentina has had a quarter century without growth at a time of rapid economic growth in the rest of the world — and government spending systematically grows faster than GDP and exceeds government revenues. The central bank borrows about 80 percent of the private banks' lending power.

Argentina has had a quarter century without growth at a time of rapid economic growth in the rest of the world and government spending systematically grows faster than GDP. Spending declined when the final crisis of the Argentine economy began in 1982, but more because of resource constraints than deliberate political action — and too late to avoid the financial crisis that brought hyperinflation (approaching 5,000 percent in 1989). The government ran a primary deficit (not including interest payments) every year from 1961 to 1989, so it issued money and interest-bearing debt. As a result, the economy experienced high real interest rates and inflation.

Despite heavy fiscal pressure, fiscal spending has continued to grow, systematically exceeding revenues. From 1964 to 1975, the deficit was financed by creating money; with the fall of Peron and the beginning of a military regime, debt financing became significant. Rodriguez' regression study shows that every 1 percent of primary deficit is financed with 0.7 percent of revenue from creating money — the effect of collecting which is an additional 67.9 percent of inflation.

Public debt plays a peculiar role in Argentina's finances. The central bank has become the chief borrower of about 80 percent of the private banks' lending power. In this context, a policy of tight money to reduce aggregate demand basically increases the transfers from the public to the private sector because of the higher deficit that the rise in interest rates generates.

The pressure that government debt puts on the financial markets is best captured by evaluating that debt at the commercial exchange rate. When the stock of debt gets out of line with available reserves, pressures mount against the currency and devaluation follows. Then the remaining stock of debt rises at rates far beyond levels consistent with a fixed exchange rate — and a new crisis begins to develop.

This paper — a product of the Macroeconomic Adjustment and Growth Division, Country Economics Department — is part of a PRE research project, The Macroeconomics of the Public Sector Deficit (RPO 675-31). Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Raquel Luz, room N11-057, extension 34303 (90 pages).

633. The Macroeconomics of the Public Sector Deficit: The Case of Thailand

Virabongse Ramangkura
and Bhanupongse Nidhiprabha

Thailand's pattern of public expenditure finance — relying more on tax revenues and commercial and private borrowing, and less on central bank loans and money financing — has contributed to Thailand's macroeconomic stability. This year, the government proposes a balanced budget, after three years of fiscal surplus.

In the past, the Thai government usually ran a budget deficit. In recent years, the deficit has become a surplus. A continued high growth rate in the last three years produced an unexpected rise in tax revenues, and the growth of public spending was effectively controlled. The government has adopted an early retirement plan for foreign debts and in fiscal 1991, for the first time in recent history, the government proposes to balance the budget.

The central government's actual spending is usually below planned spending — which is overestimated during slumps and underestimated during booms. Tax capacity has increased gradually over time relative to GDP. This factor has contributed most to reducing the public deficit. There have also been more automatic stabilizers and a decline in dependence on foreign trade tax.

Thailand's pattern of deficit finance has contributed to macroeconomic stability. In times of high deficit, the government relies less on borrowing from the central bank and more on borrowing from commercial banks and the private sector. Money-financed deficits are more likely to exacerbate inflation and the current account deficit than any other method of deficit financing. The strong growth of the Thai economy is attributable partly to appropriate fiscal responses to external shocks. Stable prices helped facilitate the depreciation of the real effective exchange rate, further strengthening export and output growth.

This paper — a product of the Macroeconomic Adjustment and Growth Division, Country Economics Department — is part of a PRE research project, The Macroeconomics of the Public Sector Deficit (RPO 675-31). Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Raquel Luz, room N1. -057, extension 34303 (73 pages).

634. Trends in Developing Country Exports, 1963-88

Bela Balassa

Contrary to earlier theories, developed countries' imports from developing countries tend to grow faster than the developed countries' gross domestic product. And despite the alleged increase in developed countries' import barriers after 1973, their imports from developing countries have accelerated. Exports have grown most rapidly among outward-oriented developing countries.

Ragnar Nurkse and, subsequently, Raul Prebisch and Gunnar Myrdal expressed the view that developed countries' imports from developing countries tend to increase less rapidly than the developed countries' gross domestic product. It has been further suggested that this situation is aggravated by the decline of economic growth rates in developed countries and by their protectionist actions toward imports from developing countries. The conclusion has been reached that developing countries do not have favorable prospects in developed country markets.

The results that Balassa presents conflict with the earlier claims. His results indicate that developed countries' imports from developing countries tend to grow faster than the developed countries' gross domestic product. And despite the alleged increase in import barriers in developed countries after 1973, the growth of developing countries' exports to these countries accelerated during the period. A 1 percent rise in the gross domestic product of developed countries was associated with a 1.2 percent increase in their nonfuel imports from the developing countries in 1967-73, and the corresponding estimate is 2.6 percent for 1973-88.

Among groups of developing countries, exports grew more rapidly in countries that pursued outward-oriented policies. In turn, continual inward orientation led to losses in export market shares. These results are reinforced when individual countries are considered.

At the same time, the product composition of developing countries' exports of manufactured goods exhibits a considerable upgrading of exports between 1963 and 1988. There was a shift from wood products and furniture and the group of other industries to engineering products as well as changes in the product composition of several product categories.

Despite the operation of the Multifibre Arrangement (MFA), developing countries' exports of textiles and clothing gre only slightly less than the total manufactured exports of these countries. And the exports of wearing apparel that were supposed to be particularly affected by MFA limitations grew more rapidly than the overall average.

This paper — a product of the Office of the Vice President, Development Economics — has been prepared as a background paper for the *1991 World Development Report*. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact the World Development Report office, room S13-060, extension 31393 (37 pages, with tables).

635. Exchange Rates and Foreign Trade in Korea

Bela Balassa

Korea's exchange rate has had a greater effect than other domestic economic variables on its exports, which have been key to its outstanding economic growth. Thus Korea's use of the exchange rate as a policy variable makes good sense and should be continued as long as domestic and foreign inflation rates differ.

Korea's exports have made an important contribution to its outstanding economic growth. Its exports, in turn, have been affected by domestic economic variable including exchange rate policy, and by external influences.

Among domestic economic variable the exchange rate appears to have had greater influence on exports than changes in export prices or changes in the prices of competing domestic goods. Taking into account that Korean exports are influenced by external factors, such as foreign export prices and foreign incomes, does not affect this conclusion.

Korean imports are affected by domestic income, the exchange rate, import prices, and the prices of competing domestic goods. Again, the influence of the exchange rate is greater than that of import prices and the price of domestic goods.

The results indicate that Korea can usefully employ the exchange rate as a policy variable. This has been the case during much of the 1965-88 period that Balassa considers, except for 1975-80, when it led to a substantial overvaluation of the currency. Korea should also use the exchange rate in the future as long as domestic and foreign inflation rates differ.

This paper — a product of the Office of the Vice President, Development Economics — is part of a larger effort in PRE to examine exchange rates and trade policies in developing countries. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Clare Cuskelly-Young, room S9-047, extension 39413 (16 pages).

636. Economic Integration in Eastern Europe

Bela Balassa

Among the alternatives for the future of the Council for Mutual Economic Assistance, its dissolution seems most appropriate in view of differences in the extent and speed of reform among its Eastern European members.

The Council for Mutual Economic Assistance (CMEA) was established by Bulgaria, Czechoslovakia, Hungary, Poland, Romania, and the Soviet Union in 1948 as response to the Marshall Plan. But unlike the Marshall Plan it provided no financial assistance to its member countries and its activities were limited to trade in the framework of bilateral and multilateral negotiations. Because of centralized decisionmaking, the lack of price signals, and the bilateral balancing of trade flows, the CMEA countries failed to exploit their trade potential. And although the smaller CMEA countries benefited from receiving Soviet energy and raw materials at low prices in exchange for often poor quality manufactured goods, these gains were more than offset by the losses suffered because of insufficient technical change and the straightjacket of the socialist planning system.

For the future of the CMEA, four alternatives present themselves: maintaining the present arrangements, marketizing the CMEA, reforming the CMEA, and dissolving the CMEA. In view of differences in the extent and the speed of the reform efforts in Eastern European countries, the last alternative appears most appropriate. At the same time, the more developed CMEA countries should seek association with the EC, followed by membership.

For the transitional period, proposals have been put forward for establishing payments arrangements among the former CMEA countries. These proposals have little to commend them as they would involve providing credit on the basis of the mutual trade of the countries concerned rather than their total trade. And while clearing arrangements would bring some benefit, the countries in question should pursue the objective of convertibility.

This paper — a product of the Office of the Vice President, Development Economics — is part of a larger effort in PRE to examine reforms in the Eastern European socialist countries. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Clare Cuskelly-Young, room S9-047, extension 39413 (22 pages).

637. Poverty in Poland: 1978-88

Branko Milanovic

As a result of Poland's economic crisis, which began in 1978, the proportion of Polish people living below the poverty line increased from 10 percent to almost 20 percent. Farm and mixed (farm / nonfarm) households weathered the crisis better than workers and pensioners — probably because farmers could vary their crops and workers in mixed households could choose between work in socialized industry or private agriculture.

The economic crisis that began in Poland in 1978 significantly reduced the population's average incomes (about 20 percent by 1988) and increased the proportion of the population living below the poverty line by 10 percentage points. (It is significant that 3.1 million of the 7 million estimated poor in Poland are the "new poor.")

The composition of the poor has also changed. Before the crisis, most of the poor lived in rural areas; now 70 percent of them live in cities. This change occurred because of a sharp jump in poverty among workers in the socialized sector, whose real wages declined.

The most important direct cause of increased poverty in the second half of the 1980s was increased poverty in workers' households. The second most important cause was demographic: in shifting to retirement, some workers' households joined the ranks of the poor. The only group for which the incidence of poverty decreased was mixed households.

Until the end of the period studied (1988), no unemployment appeared. The wage bill was reduced by uniform cuts in real wages — so the wage and the overall distribution of income remained practically unchanged. The real income of pensioners' households decreased almost as much as that of workers' households.

Farm and mixed households weathered the crisis better than workers and pensioners. This was not so much because terms of trade between agriculture and industry improved, but because farmers and mixed households had more flexibility about economic decisions. Farmers could change the composition of their crops and mixed households could also vary their labor inputs between work in socialized industry and private agriculture.

This paper — a joint product of the Socialist Economies Reform Unit, Country Economics Department and the Country Operations Division, Country Department IV, Europe, Middle East, and North Africa Regional Office — was written as a background paper for the 1990 *World Development Report* on poverty. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact the World Development Report office, room S13-060, extension 31393 (25 pages).

638. Researching the Trade-Productivity Link: New Directions

James Tybout

No stable, predictable correlations have emerged in studies of how trade policy affects productivity growth but market concentration seems to be an important factor. Research also suggests that increased foreign competition tends to induce cuts in plant size, may improve technical efficiency, and appears not to be closely linked with firm entry patterns.

Tybout reviews the literature linking trade policy and productivity. He finds that:

• The literature on X efficiency argues that exposure to foreign competition induces managers to make an extra effort to eliminate efficiency, but makes fragile assumptions about the labor supply and changes in work incentives.

• The literature on economies of scale argues that when domestic firms enjoy market power, extra competition from foreign producers can force producers to expand or exit — but the net effect of liberalization depends on demand shifts, ease of entry or exit, and the nature of competition.

• Arguments involving technological catch-up are equally fragile. Uncertainty can lead producers to place a premium on flexibility that may mean sacrificing some productivity.

It is a mistake to think of productivity growth as an orderly shift in technology, says Tybout. Rather, the processes of learning, innovation, investment, entry, and exit are what matters. Trade orientation affects these processes through many channels, often by influencing entrepreneurial ability to monitor new technological developments or by changing the expected returns from innovation.

Figures on productivity should be approached with skepticism, he concludes. Problems of measurement error, disequilibria, and aggregation bias can easily create the illusion of trends and correlations that have no basis in the economic processes we hope to capture. But Tybout reports on two new directions in thinking about productivity growth.

The first is concerned with salvaging sectoral- and industry-level calculations by correcting for scale economies, adjustment costs, or noncompetitive pricing. These approaches still suffer significant measurement problems and aggregation bias, but give some sense of the robustness of growth series to violations of traditional assumptions.

The second new direction concerns how plant heterogeneity shapes sectoral productivity growth. New techniques from this infant (except for work on efficiency) field give a crude sense of the importance of entry, exit, and heterogeneity in shaping productivity growth patterns and some specifics on the nature of aggregation bias in industry studies.

Tybout concludes that no stable, predictable correlations have emerged, although in some countries and subperiods there is some association between trade flow patterns and indices of productivity growth at the industry level, even after correcting for several measurement problems. The effects of trade regimes on productivity growth seem to be related to market concentration, although the nature of this association is unstable.

Patterns of industrial evolution show a surprising diversity. In some economies, much of output fluctuation seems to come from the creation and death of plants; in others, size adjustments by incumbent plants are what matter. Further, there are systematic productivity differences between entering, dying, and continuing plants. So turnover patterns play an important role in shaping productivity differences.

The Bank's Industrial Competition, Productive Efficiency, and Trade project focuses on linking entry, exit, and adjustments in scale and technical efficiency with exposure to a particular trade regime. So far it appears that exposure to more foreign competition is not closely linked with patterns of firm entry, tends to induce reductions in plant size, and may cause some improvements in technical efficiency.

This paper — a product of the Trade Policy Division, Country Economics Department — is part of a PRE research project, Industrial Competition, Productive Efficiency, and Trade (RPO 674-46). Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Dawn Ballantyne, room N10-023, extension 37947 (58 pages).

639. The High Cost of Protecting Uruguay's Automotive Industry

Wendy E. Takacs

Uruguay loses between $17 million ana $35 million a year by protecting its automobile industry. Uruguayan consumers lose between $70 billion and $80 billion a year on automobiles, transferring $36 million to $44 million to domestic assembly operations and components manufactu ers.

Domestic content requirements are regulations that mandate minimum percentages of domestic value-added, or domestic components for products sold within the country, or provide strong incentives substitute domestic for imported inputs.

Australia, Canada, and many Latin American countries have used regulations of this type to foster a domestic motor vehicle industry. The result is often domestic assembly operations that import "kits" or sets of components from abroad and combine them with domesticall produced components to produce a finishe vehicle. Some countries superimposed export promotion policies on these domestic content requirements.

Takacs developed a model to investigate the distortions, costs, and transfers among groups caused by the combination of domestic content and compensator export requirements. She applied the model to the protection scheme for Uruguay's automobile industry.

She found that the protective regime keeps vehicle prices and domestic production costs high and transfers large sums to special interest groups.

Higher finished vehicle prices encourage more output from domestic assembly operations, but domestic content and compensatory export requirements discourage domestic assembly. The net effect could either encourage or discourage domestic assembly operations, depending on the net impact of the regulations. In Uruguay, the effect is to encourage domestic assembly.

Part of the consumer loss from higher prices represents a transfer to the assembly industry; part a transfer to the domestic components manufacturers; and part is an efficiency loss because domestic production and assembly is costlier than domestic production and assembly on the world market.

Trade in this industry should be liberalized. It would be possible to do so gradually within the framework of the current protective regime. Care should be taken not to inadvertently increase effective protection of the assembly industry by, for example, phasing out domestic content and compensatory export requirements on kits faster than those on finished autos — thus temporarily encouraging domestic assembly.

This paper — a product of the Trade Policy Division, Country Economics Department — was prepared as background material for the joint UNDP/World Bank Trade Expansion Program, which provides technical and policy advice to countries that want to reform their trade regimes. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Dawn Ballantyne, room N10-023, extension 37947 (26 pages).

640. The Impact of Policy on African Agriculture: An Empirical Investigation

William Jaeger

Policy in Sub-Saharan African countries is linked with the region's agricultural performance. Exchange rate policies, high taxes on agriculture, and government control of export marketing are associated with the deterioration in agricultural export performance in 1970-87. And the policy reforms of the late 1980s — where sustained and effective — are linked with increased agricultural productivity.

Jaeger examines the relationship between government policy and agricultural performance in Sub-Saharan Africa between 1970 and 1987. Using newly compiled data enabling a wider range of empirical analyses, the study assesses the impact of policy distortions on productivity over time and across countries. It assesses export agriculture and food production separately.

The analysis confirms that the deterioration of Africa's agricultural exports during the 1970s and early 1980s was associated with agriculture's high levels of direct taxation and of indirect taxation through government controls and overvalued currencies. Government controls in the marketing and pricing of export crops have contributed to the deterioration in export performance. But the large *indirect* distortions and disincentives caused by exchange rate policies are what have distinguished African policy environments from those in non-African developing countries. Econometric results show that the responsiveness of agricultural exports to changes in incentives is moderate in the short run for countries exporting tree crops but more elastic in countries exporting annual crops.

The author also investigates Africa's chronic food crises and questions the conventional wisdom that rising food imports and declining per capita production reflect primarily a production problem. Econometric results indicate that most of the rise in Africa's food imports is associated with shifting demand toward imported foods, rather than a failure of supply. The main factors causing the shift in demand are increasing urbanization, higher import capacity, and exchange rate distortions that make imported food relatively cheap. When the variation of these factors has been taken into account, the remaining unexplained trend is only 1 percent a year, caused in part by declining international prices for wheat and rice.

Jaeger establishes a link between policy reforms and the improvements observed in agricultural performance in the late 1980s. Countries with favorable policy environments have performed better in the 1980s, on average, than those with unfavorable policy environments. This has been true both in agriculture and in overall economic growth. And in countries where policy reform programs resulted in significant and sustained improvements in incentives (for example, Ghana and Togo), productivity has improved substantially. But in countries where reforms have not led to improved incentives or where the improvements were short-lived (for example, Tanzania and Zaire), little response was observable.

This paper is a product of the Trade and Finance Division, Technical Department, Africa Regional Office. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Azeb Yideru, room J3-080, extension 34663 (69 pages, with figures and tables).

641. Intertemporal Substitution in Consumption: Evidence for Some High- and Middle-Income Countries

Karsten N. Pedersen

When credit constraints are taken into account, support is found for an optimizing life-cycle model of consumption for a group of high- and middle-income countries. These results suggest that consumption by individuals is best described if it is assumed that one part of individuals plans consumption in a classical optimizing fashion, and another part follows a more Keynesian plan, where consumer expenditures are related to current income.

Pedersen tries to find support for the life-cycle model of consumption in a sample of middle- and high-income countries. He puts forward an intertemporal model of consumption that allows credit rationing for a fraction of consumers (with credit rationing defined as constraints on consumption for lack of access to credit markets).

If consumers cannot borrow against human wealth and have no financial wealth, their consumption is limited to current income. But the fraction of consumers for whom credit is rationed changes over time, as monetary authorities apply different quantitative instruments and as financial markets evolve.

Assuming rational expectations throughout, Pedersen concludes that:

- Overall, the results support the life-cycle model of consumption. Not all intertemporal elasticities of substitution are estimated at significant levels. But first order conditions of the life-cycle model, often referred to as Euler equations, are estimated in well-behaved domains for all countries when terms of credit rationing are included. Thus, one part of consumers seems to plan spending according to expectations of future real interest rates and future income expectations, while another part is tied to the current level of income because of lack of credit opportunities. Also, tests seem to approve the assumed expectation formation. The axiom of the efficient market hypothesis is accepted at 5 percent for all countries but one, and the information set's orthogonality to consumption innovations is not violated for any country.

• There is more credit rationing in middle-income than in higher-income countries. And models for middle-income countries are estimated with more uncertainty (higher standard errors of regression), which may indicate that the assumption of a representative consumer is particularly vulnerable in the middle-income countries.

Despite the simplicity of the estimation specification, the raison d'etre for the life-cycle model of consumption is supported when a credit-rationing proxy is included. It is especially encouraging that Euler equations can be estimated even for highly inflationary regimes. More precise estimates of the intertemporal elasticity of substitution could be achieved by a more sophisticated mechanism for credit rationing. But introducing more parameters tends to complicate the estimation problem, diminishing the likelihood of arriving at a solution.

This paper is a product of the global modelling project in the International Economic Analysis and Prospects Division, International Economics Department. The analysis here contributes to the specification of a North/South model with consistent intertemporal linkages that will serve the division's long-term forecasting and scenario analysis for outlook papers. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Milena Hileman, room S8-214, extension 31284 (16 pages).

642. How a Change in Brazil's Sugar Policies Would Affect the World Sugar Market

Brent Borrell

By changing its policy, Brazil could increase its sugar exports greatly. The world price would decline, but Brazil's sugar revenues would increase.

Although Brazil is the world's largest sugarcane producer, only one-third of the cane it grows is used to produce sugar; the rest is used to produce ethanol as fuel for automobiles. Still, Brazil is the world's fourth largest sugar producer. What would it mean for Brazil and for the world sugar market if Brazil were to shift largely away from ethanol to sugar production?

This question is of keen interest for the world sugar market because such a shift — although politically difficult — is possible. Brazil's system of controlling the sugarcane and sugar industries to ensure enough ethanol for domestic fuel needs is costly. With the border price of petroleum at $24 a barrel, for example, the shadow price of ethanol as a fuel substitute is about 4 to 5 cents a pound in sugar equivalent. (The world price of sugar is now 9 cents a pound.)

Borrell uses a nine-region trade model of the world sugar industry to study this question under both dynamic and stochastic simulations. Simulations were run on sustained increases in Brazilian sugar production of 0.5 million tons, 2 million tons, and 6 million tons. To examine the sensitivity of Brazil's influence on price at different phases of the world sugar price cycle, these sustained increases were simulated from two different start dates. Moreover, the model was run 60 times over the period 1985-2004, with different shocks representing random elements such as weather.

Borrell concludes that although Brazil could influence world sugar prices significantly in the short run, it could not influence them to its short- or long-term advantage by restricting production. Indeed, to the extent that Brazil could make world prices more stable by allowing its producers increased flexibility in production, removing existing production controls could provide not only substantial economic gains (in terms of increased exports to Brazil) but also more stable world prices. For other producers, there could be a tradeoff in terms of lower but more stable income.

This paper — a product of the International Trade Division, International Economics Department — is part of a larger effort in PRE to understand the impact of changes in countries' trade policies on world commodity markets. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Audrey Kitson-Walters, room S7-053, extension 33712 (30 pages).

643. Regional Integration among Developing Countries, Revisited

Andras Inotai

The formation of new, powerful economic and trading blocs and the transition market economies in Central and perha Eastern Europe has fostered a trend towara new regionalism in the world economy — which the virtual failure of the GATT negotiations may speed up. To minimize economic losses and avoia marginalization, regional groups of developing countries must increasingly work out common positions and join one of the influential groups.

Economic integration among developi countries became an important policy sue in the 1960s and early 1970s. B although intraregional trade increased some trading groups, it remained a modest share of total trade, tended to decline in the 1970s, and stagnated during mos of the 1980s. In addition, ambitious plans for joint industrialization could not be implemented.

This failure could be attributed part to the smallness of most of the market different political and economic policy orientations, the low level of economic, i dustrial, and infrastructural developmen and similar production and export patterns. Also, serious problems arose in implementing the main objectives. Trade liberalization was blocked or substantiall slowed down, highly protective barriers to trade remained untouched or were harmonized regionally, and controversy about the distribution of gains and losses could not be resolved. Dramatic changes in the world economy further affected the environment for regional integration anc cooperation.

But the formation of new, powerful economic and trading blocs — such as the single market of the European Community, the U.S.-Canada free trade area, initiatives in the Pacific basin, and the transition to market economies in Central and perhaps Eastern Europe — seems to have fostered a trend toward new regionalism in the world economy. The virtual failure of the GATT negotiations may speed this up. To minimize econom losses and avoid marginalization, regional groups of developing countries must increasingly work out common positions and join one of the influential groups.

Both factors require the gradual yet rapid smantling of barriers to the free flow of production factors within regional groups.

New approaches to regional cooperation have emerged. Attempts to revitalize dormant regional groups, to form new ocs, and to set partly new priorities are on the increase. Trade is the most important element of the new initiatives, but assessments of the possibilities and limits of regional integration have changed nce the 1960s.

Stabilization and adjustment policies have created more open, export-oriented, liberal, and competitive economies. igher exports have generated more growth and regional demand. Industrial restructuring has improved competitiveness, attracted international capital and technology, and opened up areas of intra-industrial division of labor. Export-oriented economies have proved increasingly competitive in extraregional markets.

In most cases it was not the regional training but successful outward-looking policies that improved competitiveness within the region and resulted in higher intraregional trade volumes. The strengthening of the private sector and closer cooperation in infrastructure development (mostly the more efficient use of human resources) support the shaping of an environment conducive to new opportunities for better regional trade.

Obviously, intraregional trade cannot become an alternative to trade flows that are basically oriented to the world market. But in the 1990s, intraregional trade and onomic relations are likely to grow parallel to, or even at a higher rate than, extraregional contacts.

This paper — a product of the Trade Policy Division, Country Economics Department — is part of a larger effort in PRE to study new developments in re-nal integration and their relation to trade strategies. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Dawn Ballantyne , room N10-001, extension 37947 (51 pages).

644. Trade and Payments Arrangements in Post-CMEA Eastern and Central Europe

Constantine Michalopoulos and David Tarr

Suggestions about how trade and payments can be arranged on an interim basis among the countries of the Council of Mutual Economic Assistance and the USSR now that the CMEA has collapsed.

The web of trade and payments arrangements binding countries of Eastern and Central Europe under the Council of Mutual Economic Assistance (CMEA) agreements is incompatible with these countries' recent commitments to move toward liberalized trade and currency convertibility.

But the importance to these countries' total trade of their trade with other CMEA members — and the apparent desire of the USSR and others to denominate all future mutual trade at international prices — poses a number of problems of transition for the countries of Eastern and Central Europe.

Michalopoulos and Tarr identify three broad problems in this connection:

- The breakdown of the CMEA arrangements has led to a serious breakdown of trade relations and reduced trade volume among former CMEA members. What interim arrangements can be introduced to facilitate trade?
- Denominating international trade at international prices implies changes in the terms of trade for each country in the system. Terms of trade for the USSR should improve because its main export to the CMEA — energy products — has been undervalued. But if payments are settled in hard currency, other countries of Eastern and Central Europe are going to require more financing at a time when they are already short on foreign exchange.
- All countries may not reach full currency convertibility in the near term, and old CMEA arrangements cannot continue so what interim payment arrangements can be made among these countries and between them and the USSR?

Michalopoulos and Tarr focus on possible interim institutional arrangements for trade and payments among previous members of the CMEA and how such arrangements can help address emerging imbalances in payments. They recommend the following:

- Fundamental trade reforms should allow Eastern and Central European enterprises autonomy to negotiate and conclude contracts directly with foreign firms or agents in the former CMEA countries, to be under no state obligation, and to bear the risk of their contracts. Competition should be encouraged by minimizing or eliminating licensing and price equalization and the monopoly trading privileges of foreign trading organizations. Trade should be at world prices and — until convertibility is achieved — denominated and settled in dollars (convertible currency).
- These countries' commitments to introducing competitive exchange rates and a degree of convertibility should be encouraged. Countries might not achieve convertibility at the same rate; the USSR in particular may lag behind. If so, multilateral clearing arrangements with strictly limited time settlements (no more than three months) may be a useful interim measure and can be established without outside contributions. Short settlement periods are certainly preferable to a system in which bilateral balancing of trade is forced.
- More ambitious payments schemes — patterned after the European Payments Union — are not desirable, as they may retard integration into the international economy and introduce distortions in the pattern of trade and the allocation of financing.
- Providing outside credit to support payments arrangements among Eastern and Central European countries is not recommended — whether such arrangements include or exclude the Soviet Union. Such credit helps countries finance intraregional balances, which have little economic justification and could result primarily from the participants' ineffective macroeconomic policies.

This paper — a joint product of the Policy and Review Department and the Trade and Finance Division, Technical Department, Europe, Middle East, and North Africa Region — is part of a larger effort in PRE and the Region to investigate the challenges of economic reform in Central and Eastern Europe. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Maureen Colinet, room S12-045, extension 34698 (31 pages)

645. Poverty, Policy, and Industrialization: Lessons from the Distant Past

Ben Polak and Jeffrey G. Williamson

In the first stages of an industrial revolution, real wage rates for unskilled workers grow only slowly (the poor benefit, but not proportionately). After that, real wages for the unskilled increase proportionately. Meanwhile, modern economic growth may erode traditional entitlements that serve as safety nets in preindustrial societies.

Pessimists say industrialization increased poverty; optimists say it didn't. Polak and Williamson argue that how much industrialization eradicates poverty depends on the form industrialization takes. Not economic growth by itself, but the processes and policies associated with different growth regimes make the poor poorer. The better we understand that, the better we can understand how contemporary economic growth may aid or impede progress in eradicating poverty in the Third World.

In a long essay (with many tables and figures), Polak and Williamson address two questions: First, what happened to the proportionate share of the population iving in poverty, and to the living standards of the poor, during nineteenth century industrial revolutions? Second, why did poverty statistics behave the way they did?

They answer the first question by drawing on official statistics on poor relief n England and America, combined with the famous poverty surveys done by Booth, Rowntree, and others. The evidence suggests that in the early stages of industrialization, the poor benefited less than proportionately from economic growth, out that rapid increases in real wages for unskilled labor subsequently led to significant improvement in the well-being of the poor.

In answering the second question, hey identify and discuss four factors that might affect the poor during an industrial volution:

• Inequality and the living standards f the poor will respond to technological vents. In England and America, unskilled labor-saving technological progress initially tended to retard growth in demand for unskilled labor, inequality rose, and the poor failed to share proportionately in economic progress. But this process was quickly reversed: real unskilled wage rates grew rapidly, and poverty declined.

• The cost of living for the poor may rise, eroding their living standards in ways conventional income statistics may fail to capture. The cost of food and urban housing rose disproportionately, for example—and industrialization cheapened the goods the poor produced relative to the goods they consumed.

• The early stages of industrial revolutions may undermine both the earning potential of secondary unskilled workers and the secondary earning sources of primary unskilled workers. Polak and Williamson focus on how technical change affected the demand for old labor, child labor, and female labor — particularly the cottage or domestic industries that are important to some of the poor.

Modern economic growth may erode traditional entitlements that serve as safety nets in preindustrial societies. It may be convenient to think otherwise, but typically the poor in preindustrial European and North American societies were *not* supported by the family and private institutions. Much of the responsibility for the poor lay with the state and other formal, statelike institutions that intervened in food markets. Where laissez-faire policies were adopted during the Industrial Revolution — as in America and England — many of the poor, especially the extremely poor, became more vulnerable to adverse events.

This paper — a product of the Office of the Vice President, Development Economics — was prepared as a background paper for the 1990 *World Development Report* on poverty. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact the World Development Report office, room S13-060, extension 31393 (145 pages, with figures and tables).

646. The Developmental Effectiveness of Aid to Africa

Tony Killick

Aid to Sub-Saharan Africa has been less effective in promoting economic development than has aid to other regions. Policies in the recipient countries of Africa — though certainly not the only factor — play the most important role in determining aid's effectiveness. At the heart of the problem is politics, and the solution rests in the hands of the people of Africa.

Killick uses an informal analytical framework to assess the developmental effectiveness of aid to Sub-Saharan Africa. The framework provides a production function-type equation for determining income growth and conveys that:

• There are many influences besides aid on country economic performance.

• Domestic policies have a pervasive influence on the whole system.

• Aid also has an important influence, in raising import and investment capacity and in other ways.

Agency evaluations of the overall effectiveness of aid record fairly high levels of project success, but it is unclear how much weight should be placed on these results, particularly with respect to projects' ability to reach the very poor. A review of the literature on the effectiveness of adjustment lending program shows that they help raise economic performance to some degree but less than dramatically. It is even less clear that they are socially cost-effective. The evidence on aid effectiveness favors a moderately positive but still rather tentative verdict.

The author presents evidence on aid in Africa that suggests that the high pas levels of aid have been unable to preven serious economic deterioration and that its effectiveness is considerably less than in other regions. Nor have donors been able to offer much assistance in African governments' design of development strategies. Case studies of Côte d'Ivoire and Ghana support the conclusion that there is much room for increasing the effectiveness of aid to Sub-Saharan Africa

Determinants of the effectiveness of aid can be broken down into factors located primarily in recipient countries (the policy environment and institutional or absorptive capacity) and those relating primarily to conditions and policies in donor countries (the world economic environment and the policies and practices of aid agencies).

Recipient-country policies are the decisive influence on the effectiveness of program, sectoral, and project aid. Policy mistakes in particular have contributed to declines in export market shares and in saving and investment.

Absorptive capacity — the economic

system's ability to put additional aid to productive use — is weakened by skill shortages, weak policies, institutional weaknesses, and budget constraints and recurrent costs. But of more fundamental mportance are basic structural weaknesses of Sub-Saharan African economies and the adverse characteristics of some political systems and processes. A crisis of governance in some Sub-Saharan African countries is a fundamental obstacle to ncreasing the developmental effectiveness of the aid they receive.

The effects of the hostile *global economic environment* are often aggravated by donor-country policies, particularly the trends and policies that worsen Africa's terms of trade, debt-servicing burdens, and access to world savings. Some *donor-country policies and practices*, such as using aid to promote foreign policy or commercial objectives, reduce the quality of aid and thus its potential developmental value. Donor agency weaknesses further diminish the value of aid.

Killick suggests that the problem of aid effectiveness is not technocratic nor due to a shortage of advice. Politics lie at the heart of the problem. It is for the people of Africa to resolve their governance problems — and there are potentially important stirrings of political change. And although donors have to work with existing governments, they should be more selective in those they aid.

Political changes are needed to break the logjam on these issues of effectiveness, and the present state of world affairs may facilitate the necessary reordering of policy priorities by donors and recipients. Engineering a fresh start in assisting the development of Sub-Saharan Africa countries should become the priority for the newly created Global Coalition for Africa.

This paper — a product of the Debt and International Finance Division, International Economics Department — is part of a larger effort in PRE to assess the availability and potential growth impact of alternative forms of external finance for Sub-Saharan Africa. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Sheilah King-Watson, room S8-040, extension 33730 (63 pages, with figures and tables).

647. Growth Rates and Aggregate Welfare: An International Comparison

Nanak Kakwani

An alternative procedure for calculating aggregate growth rates is developed, one more suitable for comparing different countries' welfare.

Kakwani explores the relationship between growth rates and changes in welfare, using alternative procedures for measuring growth.

The Bank and other organizations commonly compute growth rates by fitting a least-squares linear trend line to the logarithmic values of economic indicators for a period. But is the least-squares procedure appropriate for measuring people's economic welfare over time?

Kakwani develops a conceptual framework for deriving an aggregate growth rate from a welfare function defined in terms of levels of per capita incomes in different years. Using this function, he derives the welfare implications of alternative procedures for estimating growth. The new procedure captures all the desirable properties of a welfare function.

Kakwani also deals with the issue of aggregating growth rates over countries. If one is interested in judging the growth rates for all countries in Africa, for example, there are two drawbacks to using the country classifications developed for the *World Development Report*. First, the method depends on exchange rates with changes in welfare. Second, the *World Development Report* gives greater weight to the growth rates of richer countries (not necessarily the most populated ones), which is highly questionable for measuring welfare.

Kakwani proposes an alternative procedure for calculating aggregate growth rates, one more suitable for comparing different countries' welfare.

This paper — a product of the Welfare and Human Resources Division, Population and Human Resources Department — is part of a larger effort in PRE to develop measures suitable for tracing a country's development over time, with special emphasis on the welfare of the population. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Brenda Rosa, room S9-137, extension 33751 (62 pages).

648. Who Paid the Bill? Adjustment and Poverty in Brazil, 1980-95

M. Louise Fox and Samuel A. Morley

By choosing an expansionary fiscal path, Brazil traded growth in the middle years of the decade for inflation and a larger debt three years later. Fox and Morley look at the impact of that trade-off on poverty alleviation in Brazil, where in 1987 roughly 45 million people lived in households below the poverty line.

Against a regional record of negative per capita growth after the world recession and debt crisis of 1982, Brazil stands out as a model for a different path. By effectively failing to adjust internal demand to the decline in external funds, Brazil set records in its region in per capita growth and inflation between 1982 and 1988.

By choosing an expansionary fiscal path, Brazil traded growth in the middle years of the decade for inflation and a larger debt three years later. Fox and Morley look at the impact of that trade-off on poverty alleviation in Brazil, where in 1987 roughly 45 million people lived in households below the poverty line. (In Latin America, only Mexico has a total population greater than the number of poor people in Brazil.)

Macroeconomic policy affects few people directly. For most poor households, the labor market is the most important source of income, as they rarely own much capital. So Fox and Morley focus on the effect Brazil's policies had on its labor market.

Their counterfactual simulation suggest that Brazil could have dealt better with rising levels of poverty in the 1980s if it had been able to reach political agreement on a reduced level of consumption in either 1982-83 or 1985 (by reducing government spending or increasing taxes and thereby reducing private consumption).

This was difficult, as the loosening of authoritarian controls gave voice and power to new groups, bringing a rush of pent-up demand for consumption, especially government services. Ironically, the failure to exercise restraint in the early and middle years of the decade comprised growth for the rest of the decade, hurting all groups.

Brazil's wage policies in the 1980s strongly benefited formal sector workers, especially during the recession. In this Brazil's experience differs sharply from many other countries during stabilization. Moreover, during the recession, private sector firms did not reduce employment as fast as output declined — choosing instead to stockpile labor and sacrifice profits. The indirect effects (the income multiplier effects) appear to have been strong enough to have prevented real incomes in the informal sector (including agriculture) from falling relative to the formal sector. When private formal sector output increased in 1983-86, so did employment. If the government had not tried to protect the wages of lower-skilled private sector workers, firms would probably not have increased employment, but increased profits.

Brazil can stabilize and return to a sustainable growth path in the 1990s, contend Fox and Morley, if all groups (including the poor) suffer a short-run loss. This loss would be short-run *only if the stabilization is effective within a short time* and private investors become confident enough to invest again. The ultimate result should be higher employment and earnings and greater government ability to increase social services to the poor. A repeat of the stabilization failures of 1986-89 offers grim prospects for the poor.

In short, prospects for reducing poverty depend on what mechanism is chosen to expand the private formal sector. In the 1970s and again in 1984-85, output growth in this sector brought both formal sector employment growth (higher paying jobs) *and* higher incomes in the informal sector — more so in the southern part of the country, where formalization is greater and where the private sector has a greater share of formal sector employment. Successful stabilization, adjustment, and growth should benefit the northeast but will probably do so less than in the south. And stabilization will be especially difficult for major cities in the northeast. Reducing poverty in this area will require policies that make growth more efficient at proverty reduction (improving the rate of trickle-down).

This paper — a product of the Country Operations Division, Country Department I, Latin America and the Caribbean Regional Office — was prepared as a background paper for the 1990 *World Development Report* on poverty. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact the World Development Report office, room S13-060, extension 31393 (45 pages).

649. An Observation on the Bias in Clinic-based Estimates of Malnutrition Rates

Margaret E. Grosh, Kristin Fox, and Maria Jackson

The bias in clinic-based estimates of malnutrition rates is large and variable in this sample.

Clinic-based data on malnutrition are the most readily available for following malnutrition levels and trends in most countries, but there is a bias inherent in clinic-based estimates of malnutrition rates.

Grosh, Fox, and Jackson compare annual clinic-based malnutrition data and those from four household surveys in Jamaica. The clinic data give lower estimates of malnutrition than the survey data in all four cases — significantly so in three.

The size of the bias was variable over time, so the clinic data were not a good indicator of either levels or trends in nutrition status.

This paper is a product of the Human Resources Division, Technical Department, Latin America and the Caribbean Regional Office. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Barbara Diallo, room I4-196, extension 30997 (12 pages).

650. Administrative Valuation of Soviet Agricultural Land Results Using Lithuanian Production Data

Karen Brooks

New land tenure arrangements in the Soviet Union require those who farm the land to pay for its use. But Soviet land markets are constrained or ineffective, and land use fees must be set administratively.

New land tenure arrangements in the USSR require that agricultural producers pay for land use. The current distorted pricing system and the absence of functioning land markets complicate land valuation, and slow the adoption of new property relations.

In a market economy that functions well, agricultural land would earn its approximate marginal value product in agricultural production. This value can be measured empirically from production data and can serve as an appropriate initial value for users' fees.

Brooks estimates marginal value products for land for 1,032 collective and state farms in Lithuania using farm-level data for 1986 and 1987 and compares the marginal value products derived from actual received producer prices with those derived from border prices with alternative assumed exchange rates for the ruble.

This paper — a product of the Agricultural Policies Division Agricultural and Rural Development Department — is part of a larger effort in PRE to analyze the agricultural transition in former centrally-planned economies. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Cicely Spooner, room N8-039, extension 30464 (26 pages, with tables).

651. Taxation of Financial Assets in Developing Countries

Christophe Chamley

The administrative cost of implicit taxes on financial assets — seigniorage, reserve requirements, lending targets, and interest ceilings — is low. But the excess burden that stems from the misallocation resources is probably a much higher fraction of revenues than that of other taxes.

In developing countries, most financial assets in formal markets are deposits at financial institutions. This potentially important tax base could be taxed at a low administrative cost.

When revenues of financial taxes are significant, implicit taxes dwarf explicit taxes. Chamley focuses on the implicit taxation of financial assets through seigniorage, reserve requirements, lending targets, and interest ceilings combined with inflation. The last instrument has often been overlooked, but it has generated more than a third of implicit revenues in some cases (Nigeria), by lowering the cost of government borrowing.

Tax revenues are difficult to measure because of regulations that prevent the use of market prices for computation and distort the meaning of some definitions. For some countries, the standard method of seigniorage grossly underestimates the revenue from financial taxation.

In Sub-Saharan countries, the impact of taxation is small and hard to detect when the financial burden is low. In countries with repeated experiences of high taxation, the impact has been substantial (more than 50 percent of revenues on the margin). In countries with more developed financial markets, such as Thailand or Indonesia, the excess burden of taxation is very large even for small values of the (implicit) tax rates.

The author discusses various sources of distortion but ignores potential impacts on the level of saving and the growth rate.

Although taxes on financial assets have a low administrative cost, the excess burden that stems from the misallocation of resources is probably a much higher fraction of revenues than that of other taxes.

This paper — a product of the Public Economics Division, Country Economics Department — is part of a larger effort in PRE to reform taxes in developing countries. Copies are available free from the World Bank, 1818 H Street NW, Washngton, DC 20433. Please contact Ann Bhalla, room N10-055, extension 37699 62 pages, with figures and tables).

652. Demographic Response o Economic Shock

Kenneth Hill

Economic downturns not associated with famine appear to have little short-term impact on mortality. Famines, whether associated with major economic downturns or not, appear to have major short-term effects on mortality.

The clear division of the world in the 1950s and 1960s into rich countries with low fertility and mortality and poor countries with higher fertility and mortality was used to support strongly held views that economic development was necessary for demographic change (particularly a decline in mortality) and that demographic change (particularly a decline in fertility) was necessary for economic development.

Cross-sectional relationships between mortality or fertility and economic indicators have been used to argue both for and against national or international health or family planning interventions. Policymakers want increasingly to know to what extent short-run economic fluctuations result in short-run demographic fluctuations.

Hill addresses this question with special attention to the possible effects on mortality of the Third World economic crises of the 1980s. He examines the historical record, working backward from the recent past to periods before the demographic transition.

The historical record, he concludes, does not support the existence of strong short-run responses in mortality to economic change and sometimes not even longer-term relationships. Clearly the strong cross-sectional relationship now evident between mortality and economic status must have arisen through some such long-term relationship. But fertility and mortality levels are low in Cuba and Sri Lanka, for example, despite less-than-impressive improvements in economic development.

Economic downturns not associated with famine appear to have little short-term impact on mortality. Famines, whether associated with major economic downturns or not, appear to have major short-term effects on mortality. Recent evidence for such a conclusion (including China in the late 1950s and possibly Ghana in the early 1980s) is bolstered by the historical record from Europe.

This paper — a product of the Office of the Vice President, Development Economics — was prepared as a background paper for the 1990 *World Development Report* on poverty. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact the World Development Report office, room S13-060, extension 31393 (29 pages).

653. The Effects of Option-Hedging on the Costs of Domestic Price Stabilization Schemes

Donald F. Larson and Jonathan Coleman

Whether a stabilization fund is hedged or not, it will inevitably generate large amounts of debt. But hedging the fund will make it more likely to survive in the short term.

Casual observation leads to the conclusion that commodity-stabilization funds tend to be short-lived. While some funds may have failed because of poor management or unwarranted political interventions, the stochastic components of commodity prices can generate insurmountable difficulties for even the most expert managers. By transferring price risk from domestic producers and consumers to government-backed stabilization funds, these programs generate welfare benefits that end abruptly when the funds fail.

In the context of a price-taking country stabilizing domestic prices through variable border tariffs, Larson and Coleman annotate the circumstance under which fund resources face large or unlimited liability and provide a simple strategy of hedging with commodity options to limit fund risk. Using stochasti computer simulations, the authors demonstrate that using financial options will generate positive net welfare gains for the government agencies backing the funds. These results are quite robust under a number of underlying assumptions. Positive net benefits stemming from fund hedging can occur even when the welfare gains to producers and consumers stemming from the stabilization program are small or nonexistent.

To the extent that international prices follow a log-normal random walk, the stochastic component of price variability can become overwhelming in relatively large samples of 500 observations increasing the error associated with price expectations and hampering the ability of fund management to determine long-run "reasonable" prices. While hedging tech niques are perhaps more obviously useful when the stochastic component of price is large, similar risk benefits occur under simulations in which prices are determin istic and only international supplies con tain a random component.

Hedging techniques will not render

the funds immortal; they will generate revenue-based risk benefits for governments backing the funds, and can generate benefits to producers and consumers by extending the probable lives of the stabilization schemes.

This paper — a product of the International Trade Division, International Economics Department — is part of a larger effort in PRE to improve the developing countries' management of commodity price risks. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Dawn Gustafson, room S7-044, extension 33714 (23 pages, plus 19 pages of annexes).

654. Reflections on Credit Policy in Developing Countries: Its Effect on Private Investment

Mansoor Dailami and Marcelo Giugale

The joint effect of both the volume of credit and its price — that is, the interest rate — is relevant to firms' investment decisions. So effective credit policy in developing countries must take into account the influence of both the credit supply and the interest rate, not just one or the other.

Previous approaches to credit policy and its role in the stabilization and adjustment of developing countries have emphasized either the role of the availability of credit or the role of its price — that is, the interest rate. Dailami and Giugale argue that effective credit policy in developing countries must take into account both interest rate and credit channels.

The authors develop their argument in the context of the link between credit policy and private investment, using a model of firms' investment behavior in an economy with exogenous, time-varying borrowing constraints. The model incorporates a credit ceiling linked to the firms' net worth and the state of the credit market.

The state of the credit market depends on factors — such as credit and interest rate policy, regulatory and supervisory practices, and market sentiments — that banks consider in making lending decisions. These factors affect banks' decisions independent of a borrower's creditworthiness. Thus, in times of tight money, firms that would otherwise have received loans may be denied them and have to postpone or cut back investment plans.

Dailami and Giugale use their model to specify an equation relating aggregate private investment to aggregate output and to two credit market variables — the real interest rate and aggregate credit. They estimate the equation for five developing countries (Brazil, Colombia, India, Korea, and Turkey) using annual data for 1965-85, and test the joint significance of both interest rate and credit supply conditions. Their findings show that interest rates and credit volume exert a joint influence on the behavior of private investment in the countries examined.

This paper — a joint product of the Financial Policy and Systems Division, Country Economics Department and the Country Operations Division, Country Department III, Europe, Middle East, and North Africa Regional Office — is part of a larger effort in PRE to analyze the role of financial policy in the growth and adjustment process of developing countries. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Maria Raggambi, room N9-041, extension 37657 (28 pages, with charts, figures, and tables).

655. Interest Rate Policy in Egypt: Its Role in Stabilization and Adjustment

Mansoor Dailami and Hinh T. Dinh

Raising interest rates is clearly essential to the success of any stabilization and adjustment programs that Egypt undertakes. But to reduce the risks of higher interest rates to its distorted economy, and to increase the benefits, increases in interest rates need to be accompanied by other adjustment measures.

An appropriate interest rate policy is considered essential to the success of stabilization and adjustment programs that Egypt might undertake. The broad objectives of such a policy would include deregulating credit and investment, raising the interest rate, and developing a "core" short-term debt market to serve as a reference point for market determination of interest rates. And as the government moves away from a regulated environment of controlled credit and regulated investment toward a more liberal system, interest rates will be the prices that guide investment decisions and ensure allocative efficiency.

Dailami and Dinh describe some of the structural problems Egypt's economy has faced in the past decade and policy initiatives that the government has undertaken, and review the economy's financial sector. They analyze the role that interest rate policy could play in Egypt's stabilization and adjustment program, particularly how it would affect the outcomes of the important objectives of attracting workers' remittances, encouraging domestic residents to hold deposits in local currency, and increasing investment efficiency.

Interest rates clearly need to be increased. But the complexity and depth of the distortions in both the real and the financial sides of the economy tend to reduce the benefits of a sharp rise in interest rates and increase the pressure on a weak financial system. Of particular concern are the potential effects of higher interest rates on the investment performance of the business sector and the solvency of the banking sector.

The authors recommend that changes in the level and structure of interest rates be planned in several steps and carried out in conjunction with other adjustment measures, such as reducing the budget deficit, reforming public enterprises, and streamlining public investment. But the increases in interest rates should be high enough to mark a clear departure from past policies and to send the proper signal to economic agents.

This paper — a joint product of the Financial Policy and Systems Division, Country Economics Department and the Country Operations Division, Country Department III, Europe, Middle East, and North Africa Regional Office — is part of a larger effort in PRE to understand the role of financial markets in the stabilization and adjustment process of developing countries. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Maria Raggambi, room N9-041, extension 37657 (34 pages, with figures and tables).

656. Relative Deprivation and Migration: Theory, Evidence, and Policy Implications

Oded Stark and J. Edward Taylor

Evidence on migration in Mexico shows that people in households relatively deprived in that village are more likely to migrate abroad than are people in households that are better situated in that vil- l. ·e.

Stark and Taylor examine the importance of absolute income and relative deprivation incentives for internal and international migration in developing country households.

Empirical results, based on Mexican village data, support the hypothesis that households' relative deprivation in the village reference group is significant in explaining migration by household members to destinations where a reference group substitution is unlikely and the eturns to migration are high.

Independent of relative deprivation, village households wisely pair their members with the labor markets in which the returns to their human capital are likely o be greatest. The results suggest that a specific type of migration constitutes a response to a specific configuration of variables, and the role of relative deprivation appears to differ for internal and international migration.

Taking relative deprivation into account when studying migration is shown to have important implications for development policy. For example, economic development that does not redress intravillage income inequalities may become associated with *more* migration.

This paper — a joint product of the Welfare and Human Resources Division, Population and Human Resources Department and the Agricultural Policies Division, Agriculture and Rural Development Department — is part of a larger effort in PRE to identify factors underlying rural change and rural economic performance. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Maria Paz Felix, room S9-109, extension 33724 (42 pages).

657. Distributional Aspects of Debt Adjustment

Ishac Diwan and Thierry Verdier

Because external debt repayments have distributional implications in the debtor country, domestic politics affect the formulation of the debt strategy. And domestic opposition to heavy debt repayment can be a blessing for debt negotiators — who are likely to get better deals with creditors as a result.

Diwan and Verdier explore how the formulation of debt repayment policies can be affected by the nature of the decisionmakers and the strength of various interest groupsMost models of debtor countries assume that all individuals in the economy are alike or that gainers compensate losers; most analysis ignores political considerations. But recent electoral campaigns in Latin America suggest that debt policy may have important distributive implications.

Diwan and Verdier argue that small penalties can be enough to deter default if they hurt the interests of groups that are closely associated with policymakers — especially when the costs of debt service can be shifted to groups with less influence on decisionmaking.

They focus on how debt policy affects domestic conflict between labor and capital, between import substitution and export promotion sectors, and between traded and nontraded goods sectors. Debt service requires austerity, which is distributed unequally; capital is better able than labor to move abroad and thus evade taxes — and with the expectation of higher taxes, capital is more likely to flee, reducing capital stocks. Meanwhile, to generate foreign resources, traded goods must expand, which requires a real devaluation; this generates a conflict with nontraded goods.

Diwan and Verdier argue that:

- Governments backed by constituencies from nontraded goods sectors are more likely to default.
- Without capital mobility, capitalists in import substitution will tend to oppose the repayment sought by capitalists in export promotion. Workers' interests will depend on imports' share in their consumption basket.
- With capital mobility, labor will oppose the extent of debt repayment sought by capitalists in both import substitution and export promotion sectors.
- Self-fulfilling external default with heavy capital flight is more likely when the default penalty is inelastic and when a left-wing government is in power.
- Assuming perfect bargaining, governments with constituencies that oppose heavy debt repayment can get better deals with creditors than governments supported by groups that favor more debt adjustment. Opposition at home can be a blessing for debt negotiators, as could be seen by the last Venezuelan rescheduling agreement (which followed street riots over price increases) and the recent Mexican debt relief agreement (which followed a very close election).

This paper — a product of the Debt and International Finance Division, International Economics Department — is part of a larger effort in PRE to understand the determinants of debt repayments by highly indebted developing countries. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Sheilah King-Watson, room S8-025, extension 33730 (31 pages).

658. Fiscal Policy with Fixed Nominal Exchange Rates: Côte d'Ivoire

Christophe Chamley and Hafez Ghanem

Côte d'Ivoire's increase in debt in the 1980s (from 30 percent of GDP to 100 percent) did little for new investment, because the investment-GDP ratio barely compensated for inflation. The country's fiscal stance hurt the real exchange rate and international competitiveness.

Côte d'Ivoire represents an ideal opportunity for a case study of the effects of fiscal policy in a developing country with a fixed exchange rate. For the last 15 years, the growth of the Ivorian economy has been dramatically affected by both exogenous factors and the responses of fiscal policy.

After a commodity boom in 1976-77, expansionary fiscal policies increased the price of nontradable goods relative to tradable goods. Government deficits induced large external deficits.

Chamley and Ghanem analyze the structure of government spending and revenues to investigate whether there is a relationship between the large government deficits and the Ivorian economy's poor performance during the 1980s. They also examine what factors determine the real exchange rate and the external balance.

This paper — a product of the Macroeconomic Adjustment and Growth Division, Country Economics Department — is part of a PRE research project, "The Macroeconomics of the Public Sector Deficit" (RPO 675-31). Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Raquel Luz, room N11-057, extension 34303 (65 pages).

659. Inflation and Growth in the Transition from Socialism: The Case of Bulgaria

Andrés Solimano

fragile political-macroeconomic equilibrium is bound to result in high inflation in the transition from socialism. The collapse of growth in Bulgaria is the result of cuts in oil deliveries from the Soviet Union and Iraq, domestic dislocation in the supply of inputs following the dismantling of central planning, and the contraction of the Soviet market.

Bulgaria's shaky macroeconomic situation is a serious obstacle for a smooth transition from central planning to markets. It has to correct large current account deficits with the convertible currency area. It also has to eliminate inflationary pressures and large price distortions. And it has to get into a path of sustainable growth.

The links between inflation, money velocity, the money overhang, and the fiscal deficit are crucial for assessing probable inflationary trends in Bulgaria. Solimano shows that with controlled prices and financial repression, low velocity keeps inflation at an artificially low level despite large fiscal deficits. But as prices are deregulated and the financial sector is reformed, velocity can be expected to increase — due to expectations of higher inflation and financial innovation.

Solimano uses cost-determined price equations to explore the effects on domestic prices of a devaluation of the leva and an increase in the price of foreign inputs imported from the Soviet Union and other CMEA countries. The input price shock has a bigger effect on internal prices than does an equivalent devaluation.

The supply response to changes in relative prices and market incentives is likely to face at least two major problems at a micro level. First, the rules of operation for firms in the productive sphere are still dominated by enterprises operating under soft budget constraints — with little price responsiveness. Second, in a setting of monopolistic competition, where individual firms have considerable market power, full price deregulation may reduce output.

Bulgaria's moves toward a market economy are likely to affect growth through several channels. The correction of macroeconomic imbalances — cutting imports and cooling aggregate demand to dampen inflationary pressures — will contract aggregate economic activity. Reforms of the incentive structure will make part of the capital stock economically obsolete, hampering productive capacity in the short run. The response of private investment to the new incentives will be highly sensitive to macroeconomic stability and the perceived probability that the reform process will last and consolidate. Otherwise, private investors will wait before acting, delaying the resumption of growth. Given these impediments, external support in the form of new financing and direct investment will play a major role in consolidating the reform and in the resumption of growth.

This paper — a product of the Macroeconomic Adjustment and Growth Division, Country Economics Department — is part of a larger effort in PRE to conduct research on reforming socialist economies. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Emily Khine, room N11-067, extension 37471 (51 pages, with tables).

660. The Development of the Colombian Cut Flower Industry

José A. Mendez

The Colombian cut flower industry is one of the major development success stories of the last 20 years, growing from small beginnings in 1966 to the world's second largest exporter of cut flowers in 1980. The industry also has become a major employer of low-skill female labor.

The Colombian cut flower industry is one of the major development success stories of the last 20 years. The industry scarcely existed in 1966 but developed rapidly.

By 1980, Colombia was the world's second largest exporter of cut flowers after the Netherlands, accounting for 8 percent of the world export supply of cut flowers, and it continues to hold that position.

This rapid development has made the cut flower industry a major contributor to the Colombian economy. Cut flowers are now the nation's leading nontraditional export and fourth largest earner of foreign exchange after coffee, petroleum, and bananas.

The industry also has become a major employer of low-skill, largely female labor drawn from the low-income areas surrounding Bogota. In 1989, the industry employed more than 70,000 workers and generated another 50,000 jobs in such ancillary industries as packaging and transportation.

Evolution of the Colombian cut flower industry illustrates how the market system enables a society to coordinate its economic activities in the most effective way. Historically, cut flower production moved from the eastern United States to the western and southern states and then to Colombia.

In both cases, development of air transportation made markets accessible within hours from anywhere in the world. This freed growers to shift production to areas with favorable land and labor costs as well as a good growing climate.

In the United States, consumers have benefited from the greater variety, lower prices, and wider availability of flowers. The U.S. economy also has benefited from the employment opportunities created by the necessity to handle and care for the increased volume of flowers at the wholesale and retail level.

This paper — a product of the Trade Policy Division, Country Economics Department — is part of a larger effort in PRE to understand the economics of the emergence of "fairness" as a standard for regulating international trade, its implications for the continued openness of the international trading system, and its continued functioning as an important vehicle for development. Copies are available free from the World Bank, 1818 H

Stree. NW, Washington, DC 20433. Please contact Nellie T. Artis, room N1C-013, extension 37947 (35 pages, with tables).

661. The Bretton Woods Agencies and Sub-Saharan Africa in the 1990s: Facing the Tough Questions

Richard E. Feinberg

The International Monetary Fund and the World Bank face a complex development challenge in Sub-Saharan Africa in the coming decade. The World Bank should take the lead in organizing external assistance efforts and structural reform programs in this region.

Both the International Monetary Fund and the World Bank recognize that Sub-Saharan Africa represents a difficult and complex development challenge.

Feinberg proposes that the Bank and the Fund take four institutional steps to deal effectively with the region's problems in the near term:

• The agencies should reconsider their planned net capital contribution to help overcome the region's severe foreign exchange constraints. A negative resource transfer could weaken the influence of the multilateral agencies and tighten the financial straitjackets already crippling many countries in the region.

• The Brady proposals represented a major conceptual step forward toward alleviating the private debt overhang that seriously burdens at least a dozen countries in the region. Additional efforts to reduce the private debts of the low-income countries will be needed to achieve the objectives of the proposals.

• The Bank's analysis of the problems facing the region argues for a faster and more comprehensive reform program. In the 1990s the Bretton Woods agencies will face increasing pressures to give more weight to issues of social equity and political variables.

• The Bank and the Fund will have to improve their ability to work together to maximize their effectiveness in the 1990s. One way to achieve more effective cooperation between the agencies would be for them to synchronize their policies on such issues as resource transfers, commercial debts of middle- and low-income countries, and economic and political conditionality.

The World Bank and the IMF should collaborate in long-term planning for Sub-Saharan Africa. Policy Framework Papers should go beyond the three-year horizon that current procedures now dictate and plan some issues for five to 10 years.

The Bank and the Fund should unite in an effort to produce strategic plans for the entire region to guide their own work and to give clear signals and realistic expectations to the region. The nations of Sub-Saharan Africa also should play major roles in designing these programs.

Collaboration will proceed more smoothly if one institution clearly has the lead — and, in this region, the World Bank rather than the IMF should take the lead in organizing external assistance efforts and policy reform programs. Such an approach would be consistent with the 1989 decision to give the World Bank primacy over structural matters.

This paper — a product of the Debt and International Finance Division, International Economics Department — is part of a larger effort in PRE to assess the availability of external resources to support African adjustment and growth in the 1990s. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Sheilah King-Watson, room S8-040, extension 33730 (32 pages, with tables).

662. Trends in Social Indicators and Social Sector Financing

Jacques van der Gaag, Elene Makonnen, and Pierre Englebert

Social indicators since 1960 show the quality of life improving in developing countries as a group. The aggregate picture masks substantial differences.

Over the past three decades, per capita GDP has increased worldwide. Van der Gaag, Makonnen, and Englebert examine whether this has resulted in better quality of life in developing countries. Their paper documents the evolution of social indicators (health, education, nutrition), private consumption, and government expenditure on the social sectors.

The authors conclude that developing countries made uneven progress in the quality of life in the period under study. Among the key findings:

• Health indicators (mortality, immunization coverage, life expectancy) showed stable improvements in all regions, but Africa's rates were the slowest.

• Of all social indicators, education made the greatest gains. In Africa, however, net enrollment ratios actually decreased in the 1980s.

• While developing nations as a group enjoyed improved indices of undernutrition in 1965-85, the degree of undernutrition worsened in more than one-third of Sub-Saharan African countries.

• The two regions characterized by economic difficulties in the 1980s — Africa and Latin America and the Caribbean — also saw declines in average per capita private consumption during that decade.

• The share of total government expenditure on health remained stable in all regions, but that of education declines in Africa, South Asia, and Latin America and the Caribbean.

The authors also note that any effort to assess trends is severely hampered by lack of information. The quality of existing data is not systematically trustworthy, and there are many gaps. The World Bank and most bilateral and multilateral agencies are placing increasing emphasis on monitoring the impact of programs. The need for simple, up-to-date data may trigger more vigorous data collection.

This paper — a product of the Welfare and Human Resources Division, Population and Human Resources Department — is part of a larger effort in PRE to improve knowledge on trends in poverty and its correlates: malnutrition, illiteracy, illness, and premature death. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Brenda Rosa, room S9-137, extension 33751 (129 pages, with tables).

663. Bank Holding Companies: A Better Structure for Conducting Universal Banking?

Samuel H. Talley

Would bank holding companies be a better structure to conduct universal banking? The device contains some important advantages, but the evidence now is limited and unacceptably high risks for banks *could be one result.*

Banking systems in many countries have become increasingly unstable in recent years. At the same time, market forces have pushed banks to expand into a variety of universal banking activities, including some that appear to involve higher risks than traditional banking operations.

Talley notes that these trends have prompted questions about whether restructuring banking organizations might permit them to pursue universal banking activities without impairing the stability of the banking system.

The basic bank holding company proposal contains three major elements:

- Any bank that wants to operate as universal bank must first form a holding company and then conduct all riskier activities in holding company units rather than directly in the bank. The bank would continue to engage in traditional banking activities that involve the usual levels of risk.
- The government would develop laws and regulations designed as safeguards to insulate the bank from any financial problems that might occur in holding company affiliates of the bank.
- Bank regulatory authorities would impose little or no supervision on holding company units. Instead, the marketplace would discipline the financial affairs of these affiliates.

The use of the bank holding company device to conduct universal banking activities can promise important public benefits including: (1) a sounder commercial banking system, (2) less banking regulation, and (3) greater competitive equality between banking and nonbanking units.

One major objective of using holding companies to conduct banking activities to preserve banking stability. The evidence is inconclusive on whether holding companies could achieve this goal.

The major risk is that policymakers may tend to assume that safeguards protecting banks are invulnerable and allow holding companies to engage in risky activities they would never consider permitting banks to conduct. If holding companies encountered serious problems because of unduly high risks, banks affiliated with them could experience serious damage as a result.

This paper — a product of the Financial Policy and Systems Division, Country Economics Department — is part of a larger effort in PRE to explore ways to increase the soundness of banking systems. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Zena Seguis, room N9-005, extension 37665 (24 pages).

664. Should Employee Participation Be Part of Privatization?

Barbara W. Lee

Employee participation has grown rapidly in many developed countries, but it is only beginning to emerge as an element in the economies of developing nations. Evidence shows that employee ownership and other forms of employee participation can ease privatization.

Employee participation in the financial and managerial aspects of firms has increased as governments and owners have tried to enhance productivity, broaden ownership, or facilitate privatization transactions.

Many developed countries are experiencing rapid growth in schemes to introduce or enhance various forms of employee participation. For example, about 11,000 firms employing 11 million workers in the United States have some form of stock ownership for employees. About 10 percent of all employees in the U.K. are eligible to participate in share ownership plans.

An estimated 500,000 employee profit-sharing plans exist in the U.S., and participatory plans are a major element in the industrial policy of such countries as Japan and Sweden. In developing countries, plans for employee participation have emerged only recently.

The effect of employee participation schemes on firm performance is mixed. Without privatization, evidence is strong that combining employee ownership or profit sharing with some direct participation produces a positive impact on firm performance. Under privatization, by contrast, there is no evidence that employee ownership alone will contribute to improved performance.

Employee ownership and other forms of participation do appear to ease privatization. Employee ownership provides a sense of security to employees that the risk of redundancy in the firm after privatization will be less. As a result, the opposition of labor may decrease.

Where layoffs do occur after privatization, share ownership may complement a severance package. Share ownership also may mute worker opposition to privatization in those countries where employees believe that they have some right to ownership in the firm, primarily in socialist and post-communist countries.

This paper — a product of the Public Sector Management and Private Sector Development Division, Country Economics Department — is part of a larger effort in PRE to assess the lessons of experience in privatization. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Gloria Orraca-Tetteh, room N9-069, extension 37646 (26 pages).

665. Microeconomic Distortions: Static Losses and their Effect on the Efficiency of Investment

Ramón López

Trade distortions can reduce the social efficiency of investment. Even a moderate, uniform tariff of 50 percent could reduce the efficiency of investment by almost a quarter.

In the past decade the developing countries have tried much harder to achieve macroeconomic stability than they have to eliminate inefficiencies from microeconomic distortions.

López has pursued a relatively new line of inquiry in examining measurement of the social income losses induced by the reduction of the investment efficiency caused by trade distortions.

Empirical findings of the study suggest a strong negative effect of trade distortions on the social efficiency of investment. Even a moderate, uniform tariff of 50 percent could cause a reduction in the efficiency of investment of up to 23 percent compared with a 0 percent tariff.

The (social) income losses caused by the reduced investment efficiency are considerable. Countries that have a moderate investment ratio (about 20 percent of GDP) can experience social income losses in excess of 18 percent in 30 years if tariffs are about 50 percent.

The existence of labor market distortions causing unemployment may increase the social value of capital. Capital accumulation moves the economy closer to the production possibility frontier by increasing employment.

This study confirms earlier findings about the relatively modest efficiency losses caused by the independent effects of specific distortions. López also found, however, a significant synergistic effect when trade and wage distortions coexist and lead to larger efficiency losses.

The key issue is the combination of price distortions favoring capital-intensive activity with wage distortions that cause unemployment and underemployment. This pattern of distortion is pervasive in developing countries.

This paper — a product of the Trade Policy Division, Country Economics Department — was prepared as a background paper for the *1991 World Development Report*. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact the World Development Report office, room S13-060, extension 31393 (36 pages).

666. Agriculture and the Transition to the Market

Karen M. Brooks, José Luis Guasch, Avishay Braverman and Csaba Csaki

The costs of food in Central and Eastern Europe during today's political and economic transition are quite high. Reducing these costs will be a difficult task involving restructuring farms and fostering competition in processing and distribution.

Agricultural sectors in Eastern and Central Europe are large so that changes in producer prices, farm employment, and land ownership affect substantial numbers of people.

In the past, food in the region was highly politicized. For decades, governments of Eastern European countries and the USSR offered their citizens stable, subsidized food prices and a steadily improving diet in an effort to demonstrate the superiority of communism over capitalism.

During the transition, the context has changed, but food remains politicized. Many consumers in the region are ill-prepared to pay the real costs of food, which are quite high. The task of reducing those costs will be difficult, involving restructuring of farms and fostering competition in processing and distribution.

Management of the agricultural transition in Eastern and Central Europe will affect the political sustainability of the process and influence agriculture's contribution to the growth of emerging market economies.

Technological considerations argue in favor of rapid restructuring and sale of farms. The new owners might choose to manage their lands jointly, and the restructured farm might look from the road much like its predecessor, but managerial and financial responsibility would be quite different.

Although the agricultural sector of all Eastern and Central Europe is large, Soviet agriculture dwarfs it in its impact on the region and the world. A positive program to stop the decline in Soviet agriculture could contribute to economic growth and political stability in the region and in the world. Failure to remedy the fundamental flaws in Soviet agriculture will speed the country's slide into poverty and ethnic turmoil — and undermine the efforts of Central and Eastern Europeans to succeed.

This paper — a product of the Agricultural Policies Division, Agriculture and Rural Development Department — is part of a larger effort in PRE to address issues related to the economic transition in Eastern and Central Europe. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Cicely Spooner, room N8-037, extension 30464 (25 pages).

667. (Forthcoming)

668. Inflation Tax and Deficit Financing in Egypt

Hinh T. Dinh and Marcelo Giugale

Egypt is able to exact an exceptionally high inflation tax without causing high inflation because of the private sector's large financial holdings. Causes for these large holdings are complex and include money illusion, foreign exchange restrictions, and financial repression. Because of the reliance on the inflation tax — which makes Egypt's overall tax regime fairly regressive — any liberalization financial markets would put pressure on domestic prices, if the underlying budget deficit cannot adjust fast enough.

Although Egypt's budget deficit is far above the level found in other low-middle-income countries, the inflation rate i Egypt has never been very high. This is because the country has managed to finance these budget deficits by resorting to an inflation tax that, at 11 percent of GDP in 1987, constitutes a large share of total tax revenues. By contrast, conventional tax revenues come to only 17 percent of GDP.

Dinh and Giugale report a large, underlying inflation-tax base — from whic the Egyptian government has collected substantial revenues — that exists because of money balances held willingly or unwillingly by the private sector. Egyptians have opted to hold underperforming domestic currency deposits for a variety of reasons: restrictions on domestic residents' freedom to legally convert Egyptian pounds into U.S. dollars; a limited black market; high insurance costs for the average investor of maintaining assets i other forms, such as gold; and a mild money illusion in the early 1980s.

The authors find that the private business sector, with a net borrowing position of 14 percent of GDP, has benefited from the inflation tax. Households, on the other hand, pay more of the inflation tax than other sectors, turning over 8 percent of GDP to the government this way. This compares with 0.5 percent of GDP that households pay in income tax. Although income tax in Egypt is fairly progressive, the greater reliance on the inflation tax makes Egypt's overall tax structure fairly regressive.

Dinh and Giugale argue that —

- Money illusion cannot last forever — if inflation begins to increase, Egyptian households will ultimately move out of underperforming domestic assets, creating strains on the banking system.
- If foreign exchange and interest rate controls are lifted — as part of an adjustment program, for instance — and if the budget deficit fails to adjust fast enough, the large base for the inflation tax will disappear, leading to a rise in inflation rates to near Latin American levels.

• Understanding the role and size of the inflation tax in Egypt will help in determining the sequencing and equity aspects of any future reform program.

• The financial side cannot continue to bear the burden for the real side; Egypt must move swiftly to cut its budget deficit, the underlying cause of its dependence on the inflation tax.

This paper is a product of the Country Operations Division, Country Department III, Europe, Middle East, and North Africa Regional Office. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Luqui Santano, room D7-039, extension 80553 (29 pages, with tables).